



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 12, 2016

Mr. Jack Oman
Atlantic Richfield Company
4 Centerpointe Drive
La Palma, CA 90623-1066
Via email only

Subject: EPA Comments on the Human Health Conceptual Site Model for OU3 Process Areas, Anaconda Mine Site, Yerington, NV

Dear Mr. Oman:

EPA has reviewed Human Health Conceptual Site Model for OU3 Process Areas Memo (the Tech Memo) submitted on 23 September 2015. The purpose of the Tech Memo is to facilitate discussion between parties and move toward completion of a draft work plan that can be reviewed as efficiently as possible. Below are General Comments and Specific Comments on the tech memo to be used as a basis for discussion.

GENERAL COMMENTS

1. A reference to a personal communication/teleconference eight years prior should not be considered an acceptable reference without documentation and concurrence of the language used therein.
2. Additional discussion should be provided regarding the potential for offsite impacts.
3. Section 5 of the Tech Memo (Receptor Populations) states that current Site operators and maintenance worker scenarios will not be included in the HHRA because these workers avoid dilapidated buildings, exposed foundations, or other areas where physical harm is a risk. However, as there are no stated engineered barriers to preclude worker contact with these areas, and as Site operators and maintenance workers could breathe particulate and/or vapor COPCs, exclusion of these receptor populations from the HHRA appears to be inappropriate. Exposure scenarios involving future site operations workers, both indoor and outdoor, should still be assessed to support risk management decision making, including the institutional controls needed for continued imposition of the health and safety program.
4. Figure 2 shows leaching/percolation of chemicals from 2 to 10 feet bgs soil to groundwater, but then shows there is no potential contact with any OU-3 groundwater, and groundwater will be evaluated as part of the site-wide groundwater operable unit (OU-1) RI and HHRA. However, exposure to COPCs in groundwater could occur via

VOC migration into a construction trench or via future hypothetical use of groundwater if groundwater is used as a drinking water supply or is used as process water.

5. While a future hypothetical residential exposure scenario is stated as being very unlikely in the Tech Memo (and this receptor population is therefore not included), it is customary that a HHRA does quantify this scenario so that the potential requirement for formal land use controls (i.e., to preclude future residential land use) can be addressed. Currently the Tech Memo simply says “In the unlikely event that future land use does not remain exclusively industrial, it may be necessary to revisit the risk assessment to assess alternative exposure scenarios.” Future hypothetical residents should be added to Figure 2, and symbols added that indicate that the routes of exposure are potentially complete. This would allow a determination as to whether formal land use controls would be required and/or maintained.
6. EPA wants to confirm the intention to run a risk-assessment on a sub-area by sub-area basis, not OU-wide.

SPECIFIC COMMENTS

1. Section 2 of the Tech Memo says details on chemical of potential concern (COPC) release mechanisms and environmental transport media have been omitted. This was done in order to focus on key technical issues for the CSM. However, some of this information is needed to allow the reader to understand whether or not the exposure media and transport mechanisms (shown in the CSM Figure 2) have been correctly assigned.
2. Section 4 of the Tech Memo (Exposure Media) states that “There is no complete exposure pathway for groundwater with anticipated future land use.” This statement must be clarified to only apply to OU3.
3. Section 4 and Figure 2. Please clarify that primary and secondary exposure pathways may be addressed quantitatively and will be at least addressed qualitatively and that incomplete pathways will not be addressed quantitatively. Is the intent to identify which exposure routes will be quantitatively evaluated versus qualitative discussion in a subsequent technical memorandum?
4. Figure 2. Define or discuss the depth interval for the soil exposure pathways. Section 5.1.2 and Figure 2. Please clarify the exposure depth (15 cm for surface soil in Figure 2) and 60 cm for assessing external radiation exposure in Section 5.1.2.
5. Section 5.2. Please clarify the age of the trespasser.

If you have any questions regarding the comments, I can be reached at 415-972-3315 or [Drscherl.christopher@epa.gov](mailto:Dirscherl.christopher@epa.gov). Please note that the comments will only be distributed via email unless otherwise requested.

Sincerely,



Christopher Dirscherl
Remedial Project Manager

cc: Harold Ball, EPA, via email only
David Seter, EPA, via email only
Jeryl Gardner, NDEP, via email only